

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT APPLICATION SUMMARY FORM

Completed by: Lisa Beckham

GENERAL INFORMATION:

Name:	Morehead State University
Address:	UPO 831 Morehead, KY 40351
Date application received:	7/2/2007
SIC Code/SIC description:	8221, Colleges, Universities, and Professional Schools
Source ID:	21-205-00005
Agency Interest:	3873
Activity:	APE20070006
Permit:	V-05-074 R2

APPLICATION TYPE/PERMIT ACTIVITY:

<input type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input checked="" type="checkbox"/> Permit modification	<input type="checkbox"/> Conditional major
<input type="checkbox"/> Administrative	<input checked="" type="checkbox"/> Title V
<input type="checkbox"/> Minor	<input checked="" type="checkbox"/> Synthetic minor
<input checked="" type="checkbox"/> Significant	<input checked="" type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input checked="" type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input checked="" type="checkbox"/> Compliance schedule included
<input type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input checked="" type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable operating limit
- ☒ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☐ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Actual* (tpy)	Potential** (tpy)
PM/PM ₁₀	13.9/4.7	45/13
SO ₂	80	215
NO _x	34	114
CO	31	108
VOC	3.1	3.3
HCl	3.9	9.0
Source wide HAPs	No data	11.1

*Taken from 2006 KyEIS

SOURCE DESCRIPTION:

Morehead State University (MSU) is a public institution of higher education that has been issued a Title V operating permit, V-05-074 R1, covering its main campus in Morehead, Kentucky. Currently, MSU is permitted to operate 2 coal-fired indirect heat exchangers, 1 gas-fired indirect heat exchanger, 12 natural gas-fired indirect heat exchangers between 1.0 and 10MMBtu/hr, Coal/Ash Transfer equipment, and additional insignificant activities. MSU is a major source for NO_x, CO, and SO₂.

Current Permitting Action: Significant Revision, V-05-074 Revision 2

The Division received an application from MSU on July 2, 2007 to modify their existing Title V operating permit. MSU requested the installation of a temporary natural gas fired boiler, to add two alternate operating scenarios, and to add a compliance schedule for Emission Unit 02. On May 11, 2007 MSU was issued a Notice of Violation for emissions of particulate matter from its No.2 coal boiler (Emission Unit 02). A performance test showed that particulate emissions averaged 0.368 lbs/MMBtu. The permitted limit for Emission Unit 02 is 0.27 lbs/MMBtu. To correct the problem MSU submitted a 502(b)(10) change, which was incorporated into Revision 1 of the permit, for the installation of a high efficiency baghouse to serve both coal boilers (Emission Units 02 and 03). Since Emission Unit 02 operates during the heating season, it was believed that the baghouse would be installed and operational before November 1, 2007; however, MSU has been unable to secure funding for the installation of the baghouse. As a result, and in order to comply with permitted emission limits, MSU has proposed not allowing operation of the No. 2 boiler until funding is secured and the new baghouse is installed. In order to provide heat to the facility during this period MSU is proposing renting an 80MMBtu/hr natural gas fired boiler. This permit includes the addition of the natural gas boiler as Emission Unit 05, the requested alternate operating scenarios and a compliance schedule. The requested alternate operating scenarios, will not allow the operation of the coal boilers while the new natural gas unit is in operation. Emissions from the new natural gas boiler do not increase the facility's potential to emit.

EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

Emission Unit 05

Temporary Indirect Heat Exchanger

Pursuant to 401 KAR 59:015, Section 4(1)(a), particulate matter emissions shall not exceed 0.10 lb/MMBtu based on a three-hour average.

Pursuant to 401 KAR 59:015, Section 4(2)(b), visible emissions shall not exceed twenty (20) percent opacity based on a six-minute average, except that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) minutes during cleaning the fire-box or blowing soot.

Pursuant to 401 KAR 59:015, Section 4(2)(c), visible emissions shall not exceed twenty (20) percent opacity based on a six-minute average, except during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

Pursuant to 401 KAR 59:015, Section 5(1)(c), sulfur dioxide emissions shall not exceed 0.80 lb/MMBtu based on a twenty-four-hour average.

Pursuant to 401 KAR 60:005, incorporating by reference 40 CFR 60.43c (d), the PM and opacity standards apply at all times except during periods of startup, shutdown, or malfunction